



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0880; Directorate Identifier 2012-CE-004-AD; Amendment 39-17422; AD 2013-08-05]**

**RIN 2120-AA64**

**Airworthiness Directives; Cessna Aircraft Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Cessna Aircraft Company (Cessna) Model 525 airplanes equipped with certain part number (P/N) air conditioning (A/C) compressor motors. This AD was prompted by reports of smoke and/or fire in the tailcone caused by brushes wearing beyond their limits on the A/C motor. This AD requires inspection of the number of hours on the A/C compressor hour meter, inspection of the logbook, replacement of the brushes on certain P/N A/C compressor motors or deactivation of the A/C system until replacement of the brushes, and reporting of airplane information related to the replacement of the brushes. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277; telephone: (316) 517-5800; fax: (316) 942-9006; email: [customercare@cessna.textron.com](mailto:customercare@cessna.textron.com); Internet:

www.cessna.com. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Christine Abraham, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4165; fax: (316) 946-4107; email: [christine.abraham@faa.gov](mailto:christine.abraham@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That SNPRM published in the Federal Register on December 6, 2012 (77 FR 72778). The original NPRM (77 FR 50644, August 22, 2012) proposed to require inspection of the number of hours on the A/C compressor hour meter, inspection of the logbook, and replacement of the brushes on certain P/N A/C compressor motors or deactivation of the A/C system until replacement of the brushes. The SNPRM proposed to retain the actions proposed in the original NPRM while revising proposed procedures for deactivating the A/C compressor motor.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

### **Request Removal of Statement About Operating Temperature Limitations**

Cessna requested removal of the statement in paragraph (i) of the supplemental NPRM about the compressor: "While the system is deactivated, aircraft operators must remain aware of operating temperature limitations as detailed in the specific airplane flight manual."

Cessna stated that the Vapor Cycle Air Condition System (VCCS) is normally activated during defog operation. The VCCS is not essential for flight following the FAA's issued Master Minimum Equipment List (MMEL), but its deactivation will have an operational impact that should be identified. Cessna reasoned that there is no mention of the compressor in the airplane flight manual (AFM) temperature limitations section; consequently, the statement provides no value and should be removed.

We agree that the statement does not directly relate to the unsafe condition. In discussion with Cessna, we learned that the temperature limitations were inadvertently removed from later revisions to the AFM. In March 2013, Cessna issued a temporary change to add the temperature limitations back into the AFM. Since this temporary change was not included in certain revisions of the AFM, the temporary change will not be required for airplanes previously produced.

We changed the statement in the final rule AD action from an action statement to a recommendation in a note.

## Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD as proposed. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM (77 FR 72778, December 6, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM (77 FR 72778, December 6, 2012).

## Interim Action

We consider this AD interim action. The return of those brushes with a discernible amount of hours time-in-service (TIS) and the reporting requirement will enable us to determine whether the current 500-hour TIS limit and replacement intervals are appropriate. After we analyze the data received, we may take future rulemaking action.

## Costs of Compliance

We estimate that this AD affects 408 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect and replace drive motor assembly brushes	11 work-hours X \$85 per hour = \$935	\$252	\$1,187	\$484,296
Return shipment of brushes to the manufacturer	\$15 per return with two required returns	Not applicable	\$30	\$12,240
Optional fabrication of placard for	1 work-hour × \$85 per hour = \$85	Not applicable	\$85	\$34,680

deactivation				
Optional deactivation or reactivation	1 work-hour × \$85 per hour = \$85	Not applicable	\$85	\$34,680

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2013-08-05 **Cessna Aircraft Company**: Amendment 39-17422; Docket No. FAA-2012-0880; Directorate Identifier 2012-CE-004-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Cessna Aircraft Company Model 525 airplanes, serial number (S/N) 525-0001 through 525-0558 and 525-0600 through 525-0701, that

(1) are equipped with part number (P/N) 1134104-1 or 1134104-5 air conditioning (A/C) compressor motor; and

(2) are certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 21, Air Conditioning.

**(e) Unsafe Condition**

This AD was prompted by reports of smoke and/or fire in the tailcone caused by brushes wearing beyond their limits on the A/C motor. We are issuing this AD to require replacement of the brushes on certain P/N A/C compressor motors or deactivation of the A/C system until replacement of the brushes. This AD also requires reporting of airplane information related to the replacement of the brushes.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspections**

Within the next 30 days after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD) or within the next 10 hours time-in-service (TIS) after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs first, do the following:

(1) Inspect the number of hours on the A/C compressor hour meter; and

(2) Check the airplane logbook for any entry for replacing the A/C compressor motor brushes with new brushes or replacing the compressor motor or compressor condenser module assembly (pallet) with a motor or assembly that has new brushes.

(i) If the logbook contains an entry for replacement of parts as specified in paragraph (g)(2) of this AD, determine the number of hours on the A/C compressor motor brushes by comparing the number of hours on the compressor motor since replacement and use this number in paragraph (h) of this AD; or

(ii) If through the logbook check you cannot positively determine the number of hours on the A/C compressor motor brushes as specified in paragraph (g)(2)(i) of this

AD, you must use the number of hours on the A/C compressor hour meter to comply with the requirements of this AD and use this number in paragraph (h) of this AD or presume the brushes have over 500 hours TIS.

**(h) Replacement**

At whichever of the compliance times in paragraph (h)(1) of this AD or paragraph (h)(2) of this AD occurs later, using the hour reading on the A/C compressor hour meter determined in paragraph (g) of this AD, replace the A/C compressor motor brushes with new brushes. Record the hours on the A/C compressor hour meter in the maintenance records at the time of replacement and repetitively thereafter replace the A/C compressor motor brushes no later than every 500 hours TIS on the A/C compressor motor. Do the replacement following Page 1, of Subject 4-11-00, dated April 23, 2012, of Cessna Aircraft Company Model 525 Maintenance Manual, Revision 23, dated July 1, 2012.

(1) Before or when the A/C compressor motor brushes reach a total of 500 hours TIS; or

(2) Before further flight after the inspection required in paragraph (g)(2)(ii) of this AD if the A/C compressor motor brush hours cannot be positively determined.

**(i) Deactivation**

In lieu of replacing the A/C compressor motor brushes, before or when the A/C compressor motor brushes reach a total of 500 hours TIS, you may deactivate the A/C. Remove the fuse limiter that supplies power to the A/C compressor motor, fabricate and install a placard that states: "A/C DISABLED." Install the placard by the A/C selection switch prohibiting use of the vapor cycle air conditioner and document deactivation of the system in the airplane logbook referring to this AD as the reason for deactivation.

Note 1 to paragraph (i) of this AD: While the system is deactivated, we recommend airplane operators remain aware of the operating temperature limitations found in the Cessna March 2013 temporary revision to the airplane flight manual.



(1) Do the steps in paragraphs (i)(1)(i) through (i)(1)(viii) of this AD to remove the compressor fuse limiter.

(i) Open aft baggage compartment.

(ii) Remove aft baggage compartment dividers.

(iii) Disconnect the main battery connector from the battery.

(iv) Tag the battery and external power receptacle with a warning tag that reads: “WARNING: Do not connect the battery connector or external power cart during the maintenance in progress.”

(v) Remove wing nuts that attach the cover to the aft power J-Box.

(vi) Remove the aft power J-Box cover.

(vii) Remove nuts securing compressor fuse limiter (Reference Designator HZ028, P/N ANL100) to bus bar. Retain nuts.

(viii) Remove the compressor motor fuse limiter from the terminals and retain for future reinstallation once compressor motor brushes have been replaced.

(2) A properly certified mechanic must fabricate and install the placard as specified in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD:

(i) Use 1/8-inch black lettering on a white background; and

(ii) Install the placard on the instrument panel in close proximity to the A/C selection switch.

(3) Do the steps in paragraphs (i)(3)(i) through (i)(3)(v) of this AD to return the airplane to service with the compressor motor fuse limiter removed.

(i) Install fuse limiter nuts on the terminals and torque to 100 inch-pounds +5 or-5 inch-pounds.

(ii) Install the aft power J-Box cover with the wing nuts.

(iii) Remove the warning tag on the battery and external power receptacle.

(iv) Connect battery connector to battery.

(v) Install aft baggage compartment dividers.

(4) If you choose to deactivate the system and then later choose to return the A/C system to service: Before returning the A/C system to service and removing the placard, you must apply the inspection and replacement requirements of the brushes as specified in paragraph (g) and (h) of this AD.

**(j) Return of Replaced Parts and Reporting Requirement**

For the first two A/C compressor motor brush replacement cycles, within 30 days after the replacement or within 30 days after the effective date of this AD, whichever occurs later, send the brushes that were removed to Cessna Aircraft Company, Cessna Service Parts and Programs, 7121 Southwest Boulevard, Wichita, KS 67215. Provide the information in paragraphs (j)(1) through (j)(6) of this AD with the brushes:

(1) The Model and S/N of the airplane;

(2) P/N of motor;

(3) P/N of the brushes, if known;

(4) The elapsed amount of motor hours since the last brush/motor replacement, if known;

(5) If motor hours are unknown, report the elapsed airplane flight hours since the last brush/motor replacement and indicate that motor hours are unknown; and

(6) Number of motor hours currently displayed on the pallet hour meter.

**(k) Special Flight Permit**

Special flight permits are permitted with the following limitation: Operation of the A/C system is prohibited.

**(l) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act

unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(m) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(n) Related Information**

For more information about this AD, contact Christine Abraham, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4165; fax: (316) 946-4107; email: christine.abraham@faa.gov.

**(o) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Page 1, of Subject 4-11-00, dated April 23, 2012, of Cessna Aircraft Company Model 525 Maintenance Manual, Revision 23, dated July 1, 2012.

(ii) Reserved.

(3) For Cessna Aircraft Company service information identified in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277; telephone: (316) 517-5800; fax: (316) 942-9006; email: [customercare@cessna.textron.com](mailto:customercare@cessna.textron.com); Internet: [www.cessna.com](http://www.cessna.com).

(4) You may view this service information at FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on April 8, 2013.

Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2013-09214 Filed 04/24/2013 at 8:45 am; Publication Date: 04/25/2013]